

Part Number: L-7677C2VBC-D



Technical Data



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Description

Static electricity and surge damage the LEDs. It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs. All devices, equipment and machinery must be electrically grounded.

Features:

- *High luminance output.
- *Design for high current operation.
- *Uniform color.
- *Low power consumption.
- *Low thermal resistance.
- *Low profile.
- *Packaged in tubes for use with automatic insertion equipment.
- *Soldering methods: wave soldering.
- *RoHS compliant.

Benefits:

- *Outstanding Material Efficiency.
- *Electricity savings.
- *Maintenance savings.
- *Reliable and Rugged.

Typical Applications:

- *Automotive Exterior Lighting.
- *Electronic Signs and Signals.
- *Specialty Lighting.



Selection Guide

Part No.	LED COLOR	Iv(cd)[1] @30mA		Φv (lm) @ 30mA Typ.	Viewing Angle[2] 2θ1/2 Typ.
		Min.	Typ.		
L-7677C2VBC-D	Blue (InGaN)	3.1	4	1.7	30°

Notes:

1.Luminous intensity is measured with an integrating sphere after the device has stabilized; Luminous Intensity / luminous flux: +/-15%.
2.θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Optical Characteristics at TA=25°C If=30mA Rθj-a=200°C/W

DEVICE TYPE	PEAK WAVELENGTH λPEAK (nm) TYP.	DOMINANT[1] WAVELENGTH λDOM (nm) TYP.	SPECTRAL LINE WAVELENGTH Δλ1/2(nm) TYP.
VB-D2	465	470	22

Note:

1.The dominant wavelength is derived from the CIE Chromaticity Diagram and represents the perceived color of the device; Wavelength: +/-1nm.

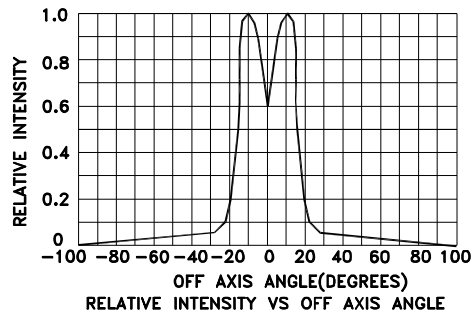
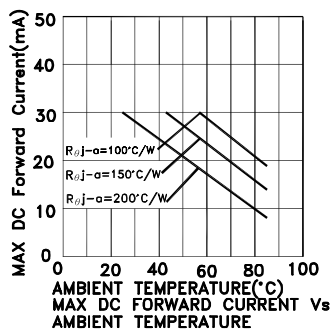
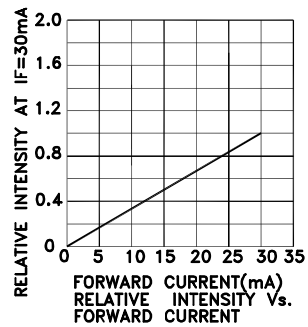
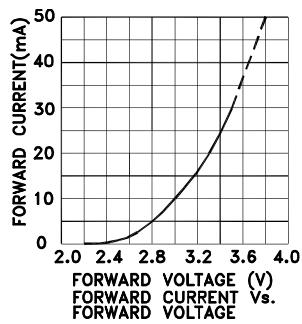
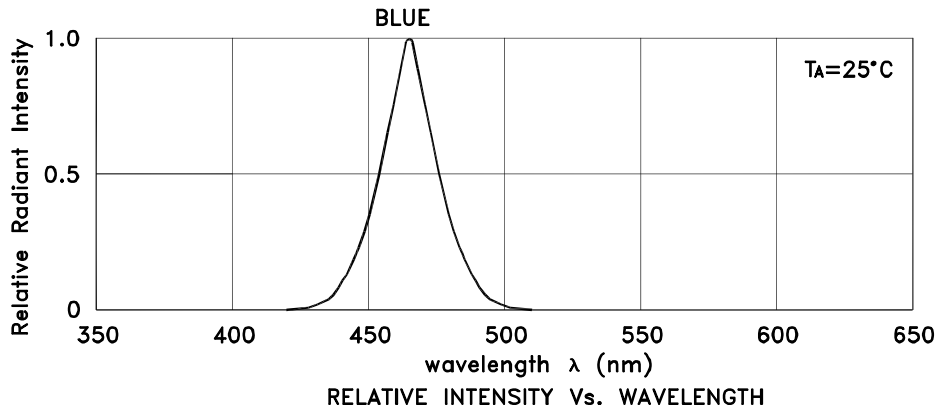
Electrical Characteristics at TA=25°C

DEVICE TYPE	FORWARD VOLTAGE [1] Vf (VOLTS) @ If=30mA		REVERSE CURRENT IR (uA) @ VR=5V	CAPACITANCE C (pF) @ Vf=0V F=1MHZ	THERMAL RESISTANCE Rθj -pin °C/W
	TYP.	MAX.	MAX.	TYP.	TYP.
VB-D2	3.5	4.5	50	100	180

Note:

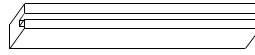
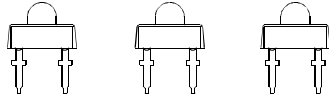
1. Forward Voltage: +/-0.1V.

Figures

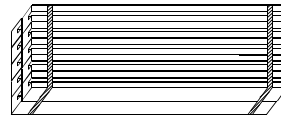


PACKING & LABEL SPECIFICATIONS

L-7677C2VBC-D



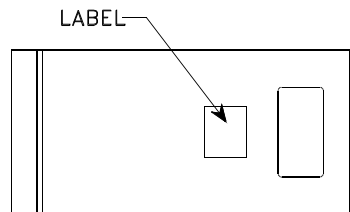
75PCS / IC TUBE(520x8.3x15mm)



750pcs / 10pcs IC TUBE




OUTSIDE LABEL



7.5K / 6# BOX

10pcs IC TUBE / BAG

<h1>Kingbright</h1>	
P/NO: L-7677C2XXX	
QTY: 750 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXX	
RoHS Compliant	

PRECAUTIONS

1. The lead pitch of the LED must match the pitch of the mounting holes on the PCB during component placement. Lead-forming may be required to insure the lead pitch matches the hole pitch. Refer to the figure below for proper lead forming procedures. (Fig. 1)

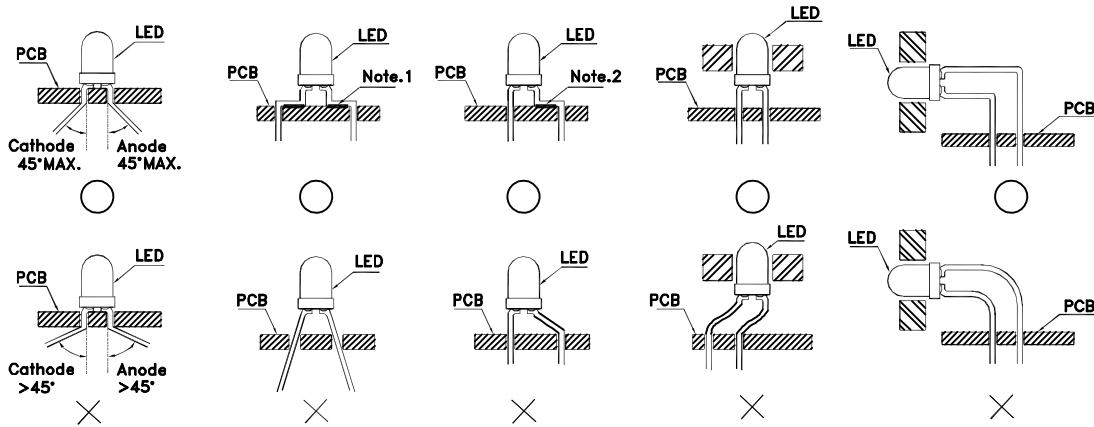


Fig.1

”○” Correct mounting method ”×” Incorrect mounting method

2. When soldering wire to the LED, use individual heat-shrink tubing to insulate the exposed leads to prevent accidental contact short-circuit. (Fig.2)

3. Use stand-offs (Fig.3) or spacers (Fig.4) to securely position the LED above the PCB.

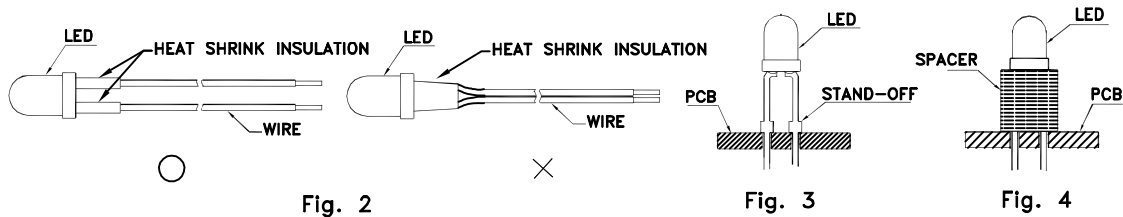


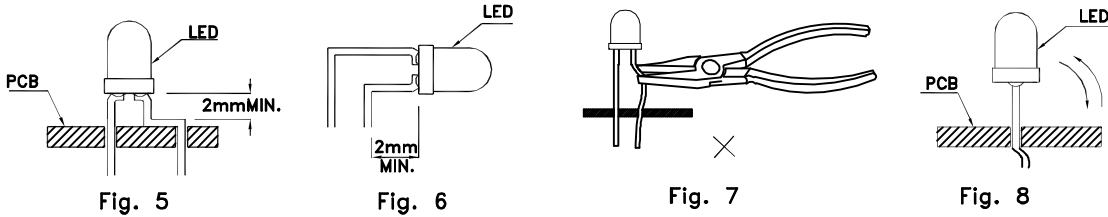
Fig. 2

Fig. 3

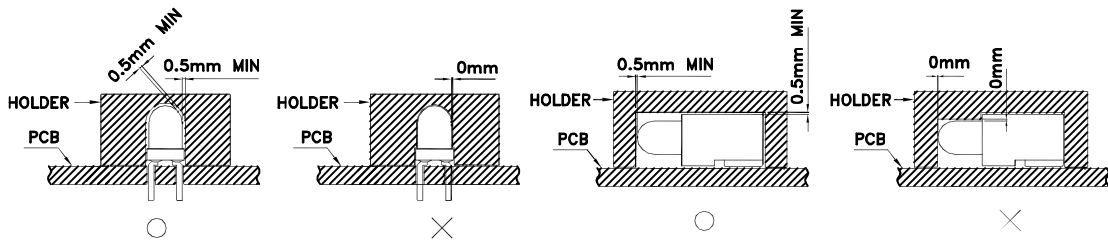
Fig. 4

4. Maintain a minimum of 2mm clearance between the base of the LED lens and the first lead bend. (Fig. 5 and 6)
5. During lead forming, use tools or jigs to hold the leads securely so that the bending force will not be transmitted to the LED lens and its internal structures. Do not perform lead forming once the component has been mounted onto the PCB. (Fig. 7)

6. Do not bend the leads more than twice. (Fig. 8)



7. During soldering, component covers and holders should leave clearance to avoid placing damaging stress on the LED during soldering.

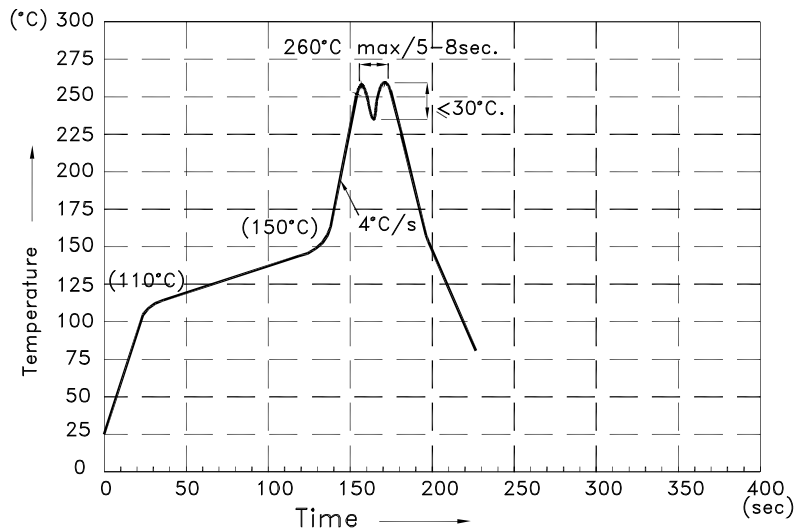


8. The tip of the soldering iron should never touch the lens epoxy.

9. Through-hole LEDs are incompatible with reflow soldering.

10. If the LED will undergo multiple soldering passes or face other processes where the part may be subjected to intense heat, please check with Kingbright for compatibility.

11. Recommended Wave Soldering Profile for Kingbright Thru-Hole Products



NOTES:

1. Recommend the wave temperature 245°C~260°C. The maximum soldering temperature should be less than 260°C.
2. Do not apply stress on epoxy resins when temperature is over 85°C.
3. The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
4. During wave soldering, the PCB top-surface temperature should be kept below 105°C.
5. No more than once.